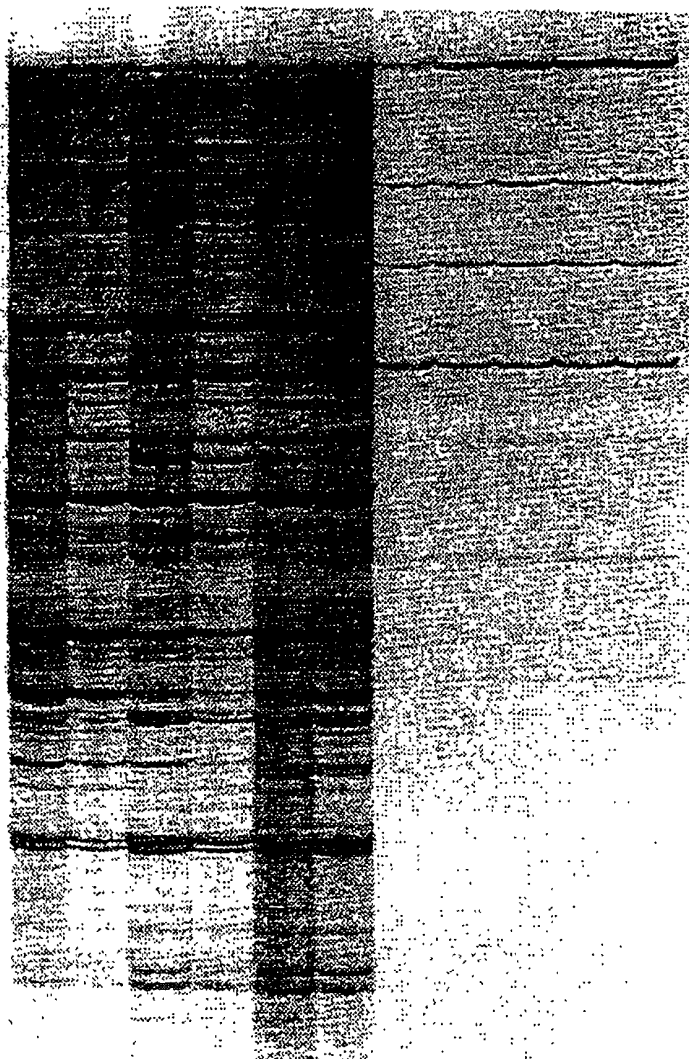


Figure 1A.

RNA Fingerprinting Studies of MCF-7 Cells

MCF-7		MCF-7		MCF-7		Controls				
W		AdrVp		AdrVpPR						
1	2	3	4	5	6	7	8	9	10	11



101200 501560

Figure 1B.

Northern Blot Hybridization of PCR Product "Clone-8"

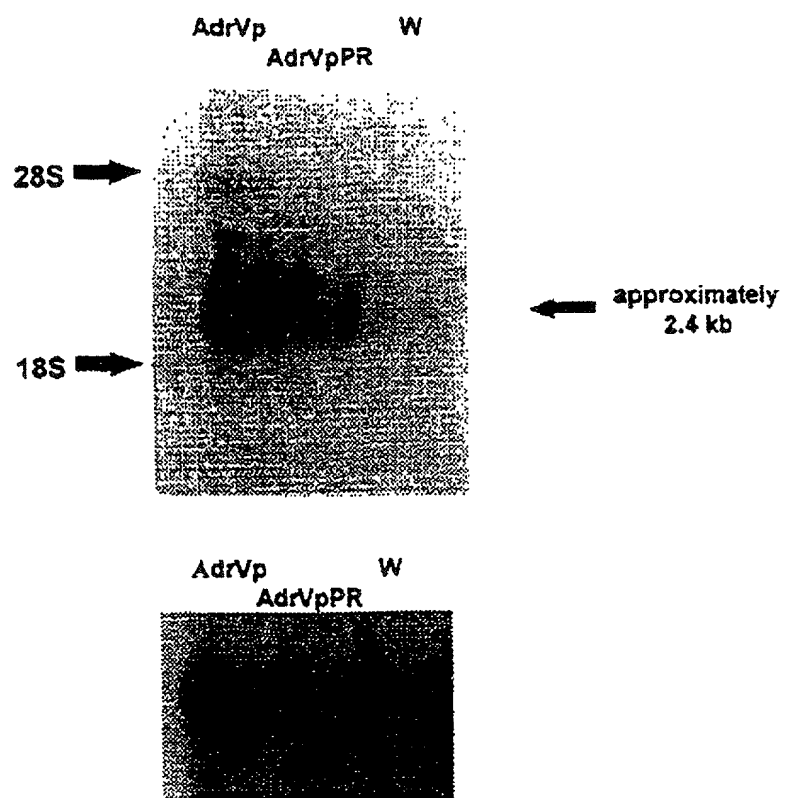
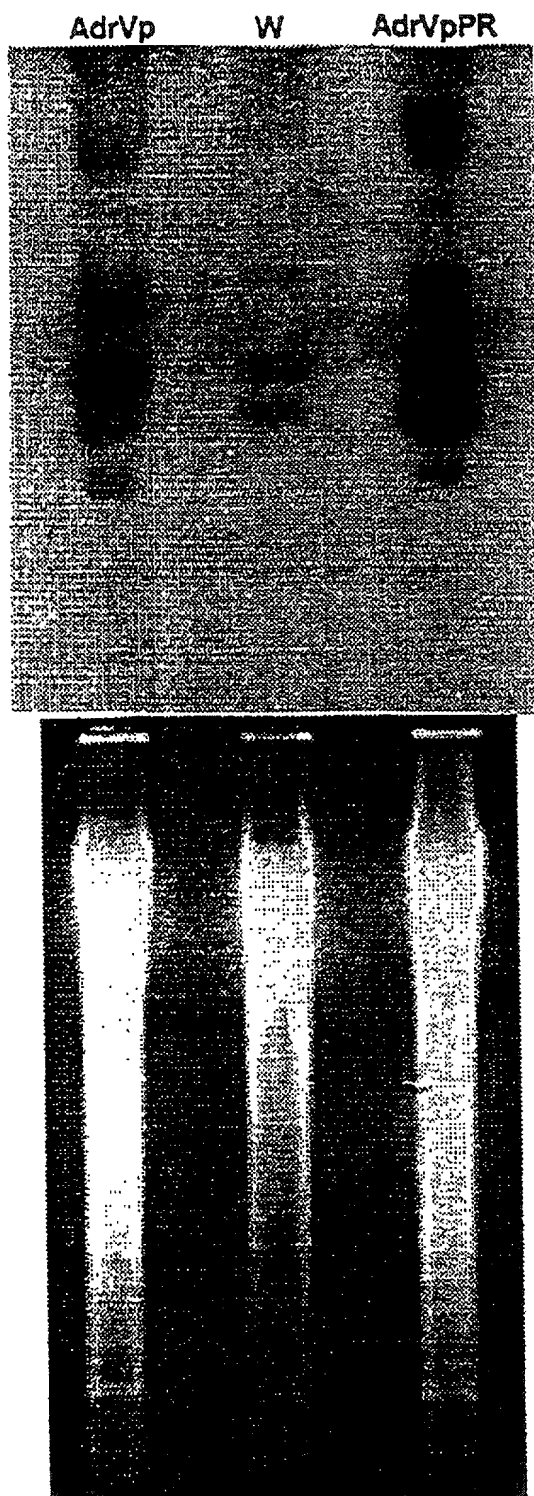


Figure 1C.

Southern Blot Hybridization--Clone 8



Downloaded from www.jstor.org

Figure 2A.

Peptide Sequence of BCRP

Length: 655 amino acids

1 MSSSNVEVFI PVSQGNNGF PATASNDLKA FTEGAVLSFH NICYRVKLKS

51 GFLPCRKPVE KEILSNINGI MKPGLNALT **Walker A motif** SSLL DVAARKDPSG

101 GLSGDVLING APRPANFKCN SGYVVQDDVV MGTTLTVRENL QFSAALRLAT

151 TMTNHEKNER INRVIQELGL DKVADSKVGT QFIRGVSGGE RKRTSIGMEL

201 ITDPSILFLD **Phosphopantetheine site** MSKQGRTIIF SIHQPRYSIF

251 KLFDSTITLLA SGRLMFHGPA QEALGYFESA GYHCEAYNNP ADFFLDIING

301 DSTAVALNRE EDFKATEIIE PSKQDKPLIE KLAEIYV **Glyc** FYKETKAELH

351 QLSGGKKKK ITVFKEISYT TSPCHQLRWV SKRSEKNLLG NPQASIAQII

401 **TM 1** VTVVLGLVIG AIYFGL **Glyc** TGIONRAGVL FELTNQCFS SVSAVELEFV

451 EKKLFIHEYI SGYYRVSSYF LSKLLSDLLP MTMLPSIIFT CIVYFMLGLK

501 PKADAFFVMM FTLMVAISA SSMALAIAG QSVVSVATLL **TM 2** MTICEVFMMI

551 **Glyc** FSGLLV **Glyc** IASWLSWLQY FSIPRYGFTA LQHNEELGQN FCPGLN **Glyc** TGN

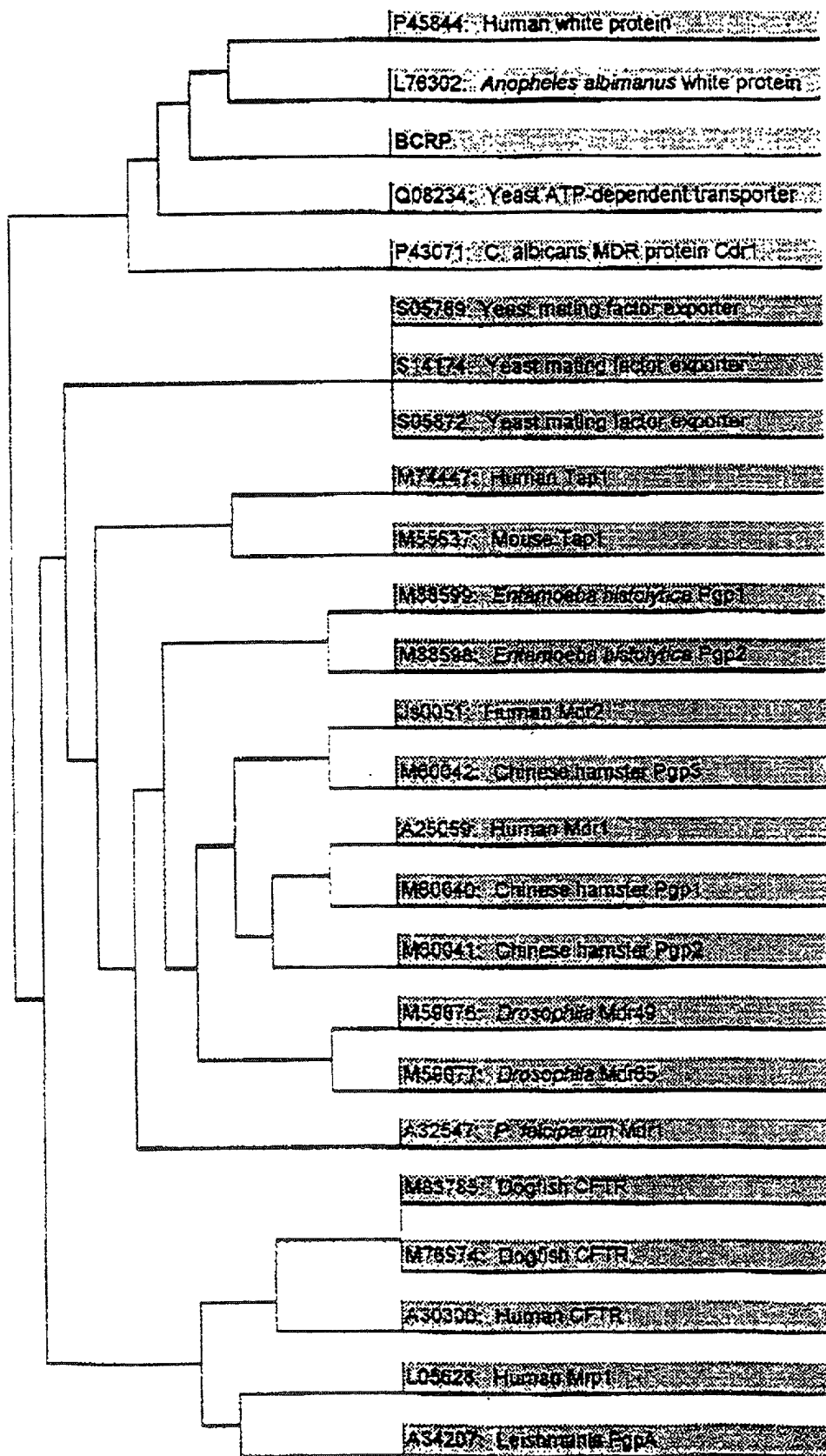
601 NPCNYATCTG EYLVKQGID LSPWGLWKNH VALACMIVIF **TM 3** LTIAYLKLLF

651 LKKYS

20250505 09:56:00

Figure 2B. Pileup dendr

Relative Similarity of BCRP to Selected Members
of the ABC Transporter Superfamily



1201 TTCCAAGCAG GATAAGCCAC TCATAGAAAA ATTAGCGGAG ATTTATGTCA
1251 ACTCCTCCTT CTACAAAGAG ACAAAGCTG AATTACATCA ACTTTCCGGG
1301 GGTGAGAAGA AGAAGAAGAT CACGGTCTTC AAGGAGATCA GCTACACCAC
1351 CTCCTTCTGT CATCAACTCA GATGGGTTTC CAAGCGTTCA TTCAAAAAC
1401 TGCTGGGTAA TCCCCAGGCC TCTATAGCTC AGATCATTGT CACAGTCGTA
1451 CTGGGACTGG TTATAGGTGC CATTACTTTT GGGCTAAAAA ATGATTCTAC
1501 TGGAATCCAG AACAGAGCTG GGGTTCTCTT CTTCTGACG ACCAACCAGT
1551 GTTTCAGCAG TGTTCAGCC GTGGAAGTCT TTGTGGTAGA GAAGAAGCTC
1601 TTCATACATG AATACATCAG CGGATACTAC AGAGTGTCAT CTTATTTCTT
1651 TGGAAAACCTG TTATCTGATT TATTACCCAT GACGATGTTA CCAAGTATTA
1701 TATTTACCTG TATAGTGTAC ^{5' 172} TTCATGTTAG GATTGAAGCC AAAGGCAGAT ¹⁷⁴⁴
_{→ 5' PCR Primer (Sense)}
1751 GCCTTCTTCG TTATGATGTT TACCCTTATG ATGGTGGCTT ATTCAGCCAG
1801 TTCCATGGCA CTGGCCATAG CAGCAGGTCA GAGTGTGGTT TCTGTAGCAA
1851 CACTTCTCAT GACCATCTGT TTTGTGTTTA TGATGATTTT TTCAGGTCTG
1901 TTGGTCAATC TCACAACCAT TGCATCTTGG CTGTCATGGC TTCAGTACTT
1951 CAGCATTCOA CGATATGGAT TTACGGCTTT GCAGCATAAT GAATTTTTGG
2001 GACAAAACCTT CTGCCCAGGA CTCAATGCAA CAGGAAACAA TCCTTGTAAC
2051 TATGCAACAT GTACTGGCGA AGAATATTTG GTAAAGCAGG GCATCGATCT
2101 CTCACCCTGG GGCTTGTGGA AGAATCACGT GGCCTTGGCT TGTATGATTG
2151 ²⁵² TTATTTTCCT CACAATTGCC TACCTGAAAT ²¹⁷² TGTATTTCT TAAAAAATAT
2201 TCTTAAATTT CCCCTTAATT CAGTATGATT TATCCTCACA TAAAAAGAA
2251 GCACTTTGAT TGAAGTATTC AATCAAGTTT TTTTGTGTT TTCTGTTCCC
2301 TTGCCATCAC ACTGTTGCAC AGCAGCAATT GTTTTAAAGA GATACATTTT
2351 TAGAAATCAC AACAACTGA ATTAAACATG AAAGAACCCA AAAAAAAGA
2401 TATCACTCAG CATAATGA

Figure 2D

Growthtree Phylogram of Selected ABC Transporters

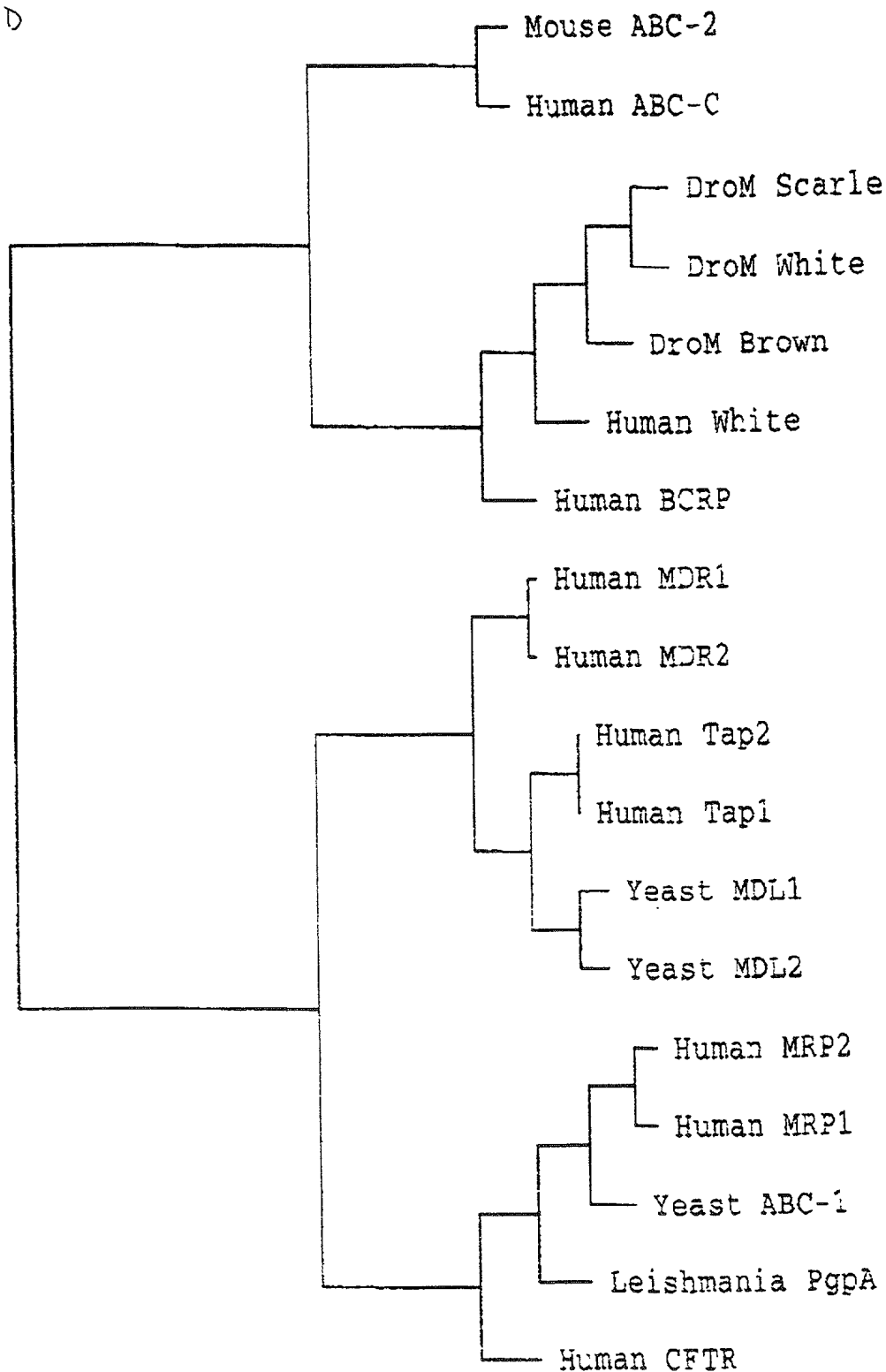
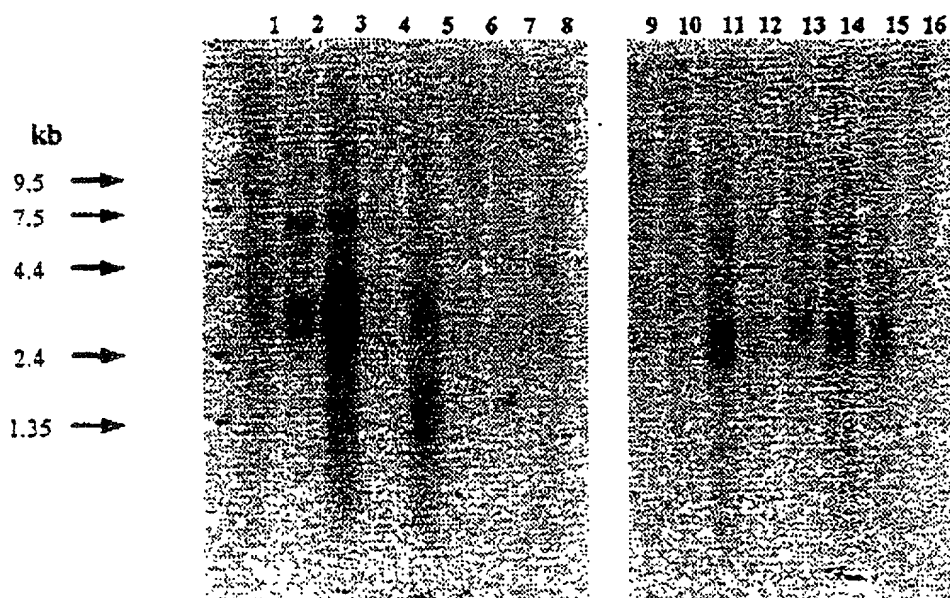


Figure 3. Multiple tissue Northern blot

Tissue Distribution of BCRP mRNA

Northern Blot Analysis using Clone 8 cDNA as Probe



Multiple tissue Northern Blots. Key to lane numbering is as follows:

- | | |
|--------------------|---------------------------------|
| 1. Heart | 9. Spleen |
| 2. Brain | 10. Thymus |
| 3. Placenta | 11. Prostate |
| 4. Lung | 12. Testis |
| 5. Liver | 13. Ovary |
| 6. Skeletal Muscle | 14. Small Intestine |
| 7. Kidney | 15. Colon |
| 8. Pancreas | 16. Peripheral blood leukocytes |

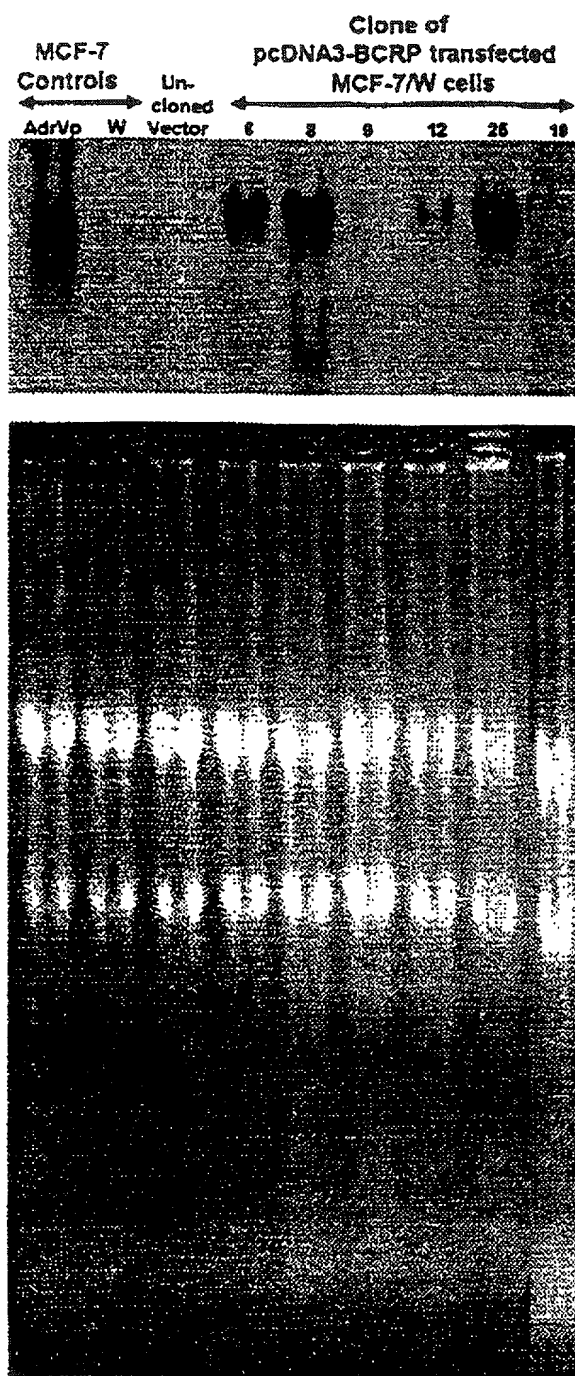
[illegible][illegible]

Fig 4B

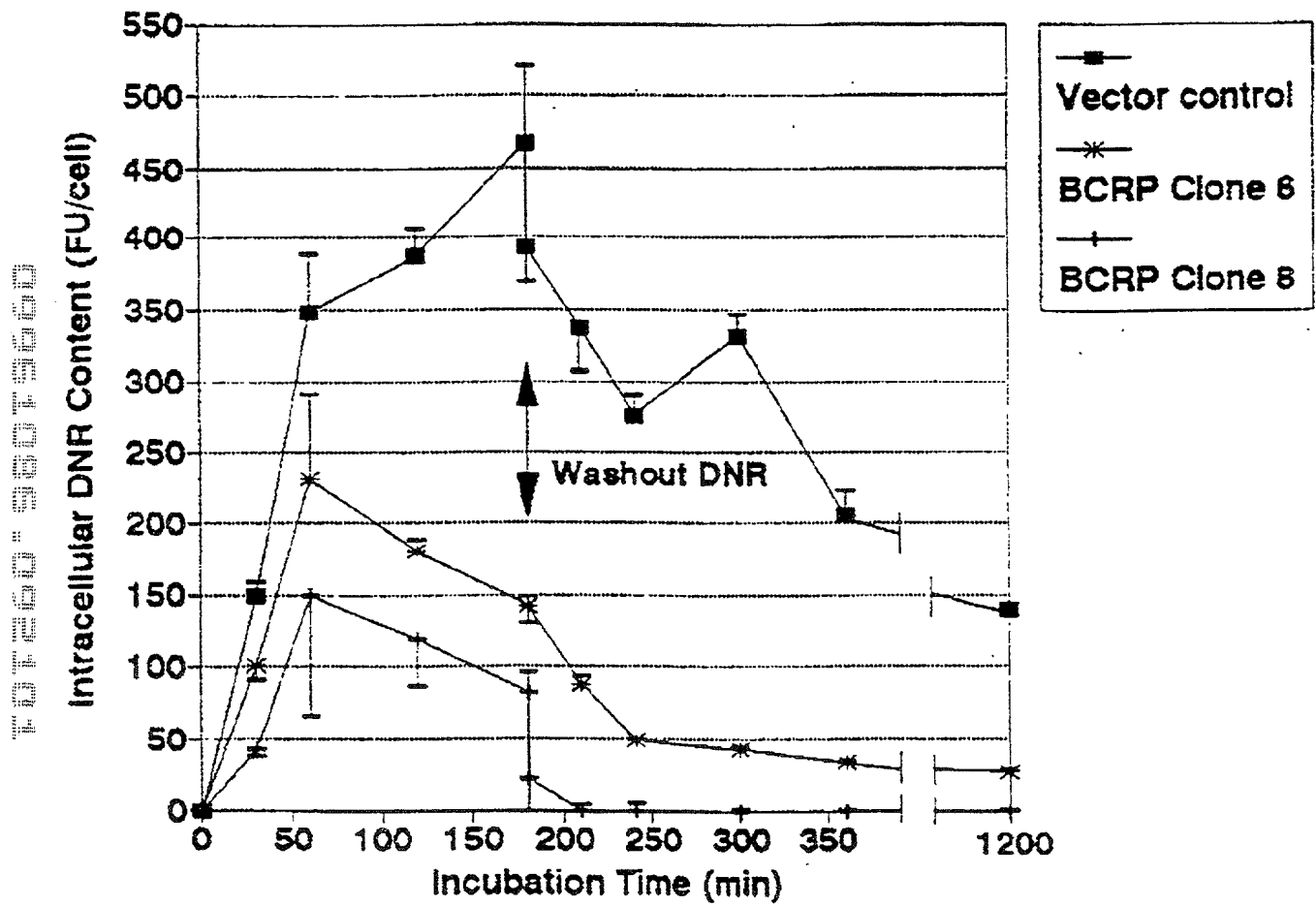


Figure 4C

Sensitivity of MCF-7 Cells to Various Chemotherapeutic Agents

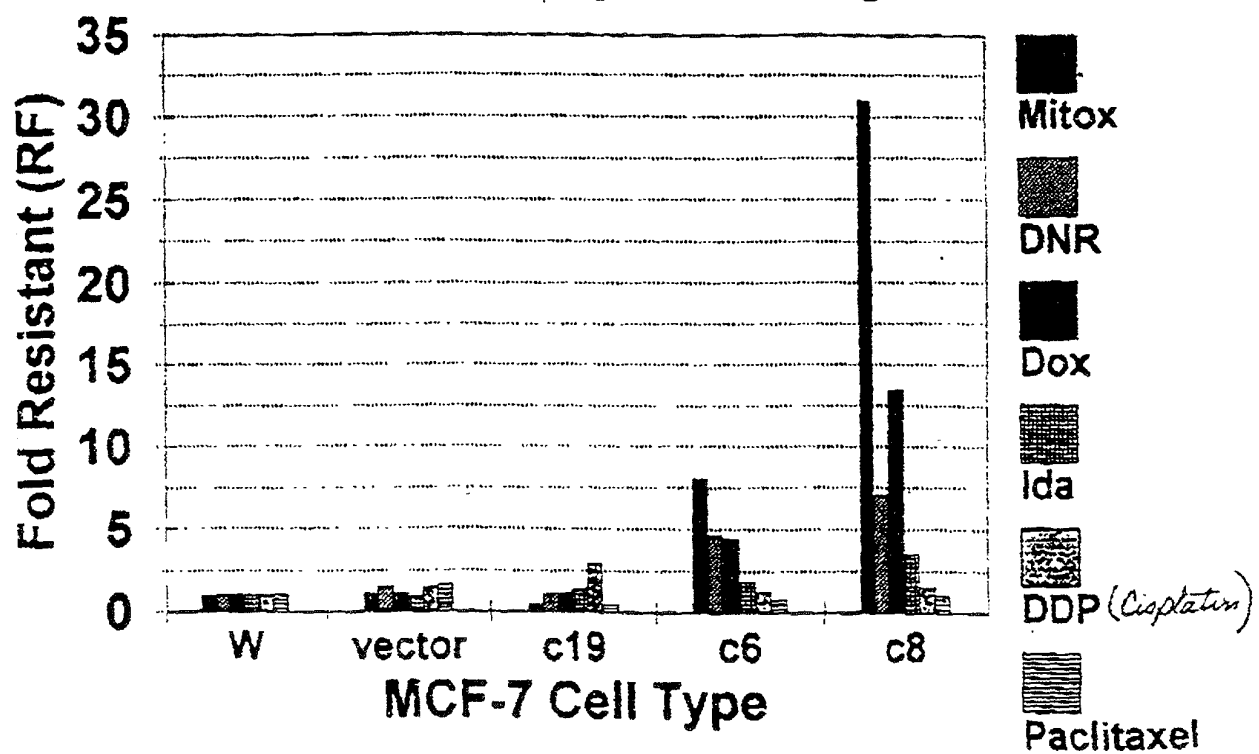


Figure 4D

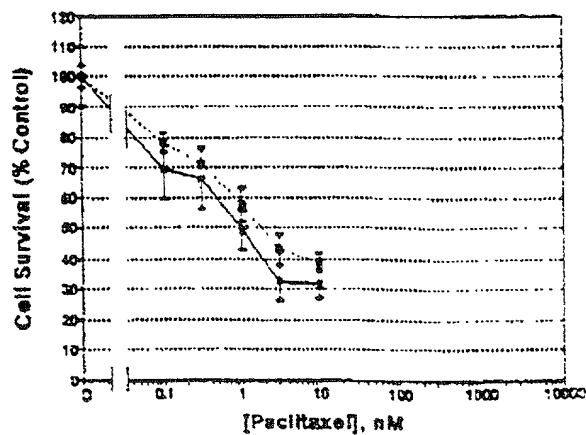
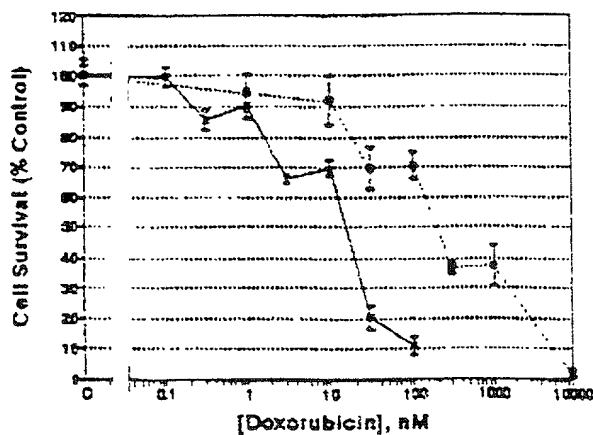
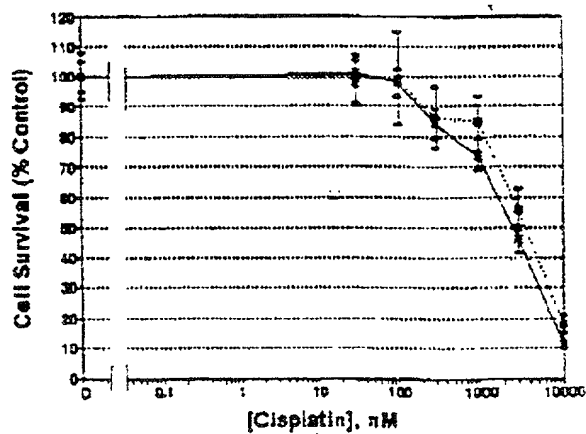
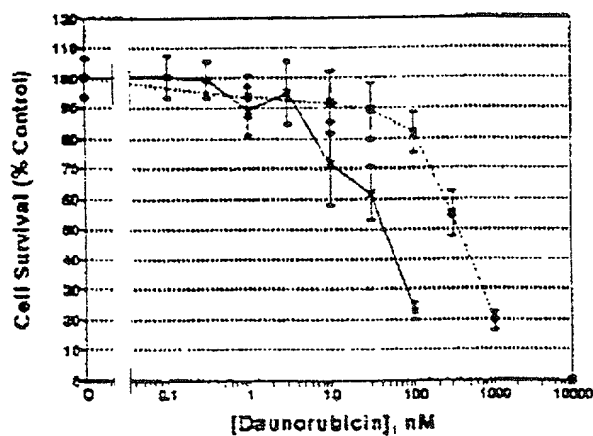
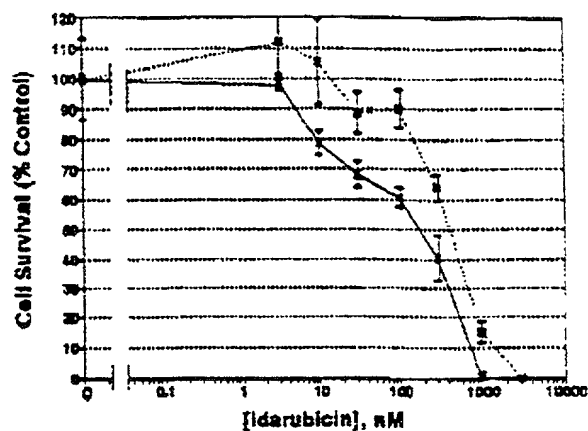
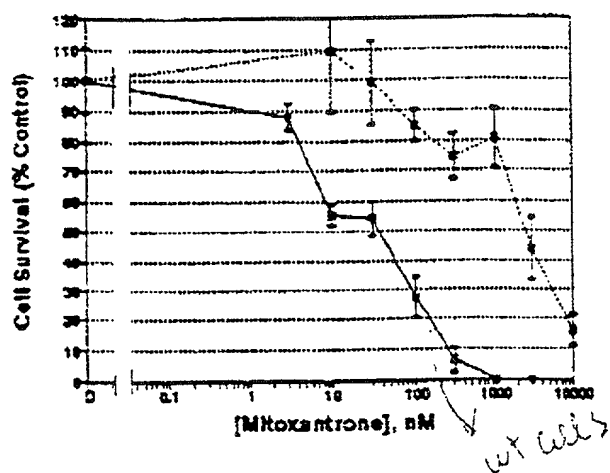


Figure 4C

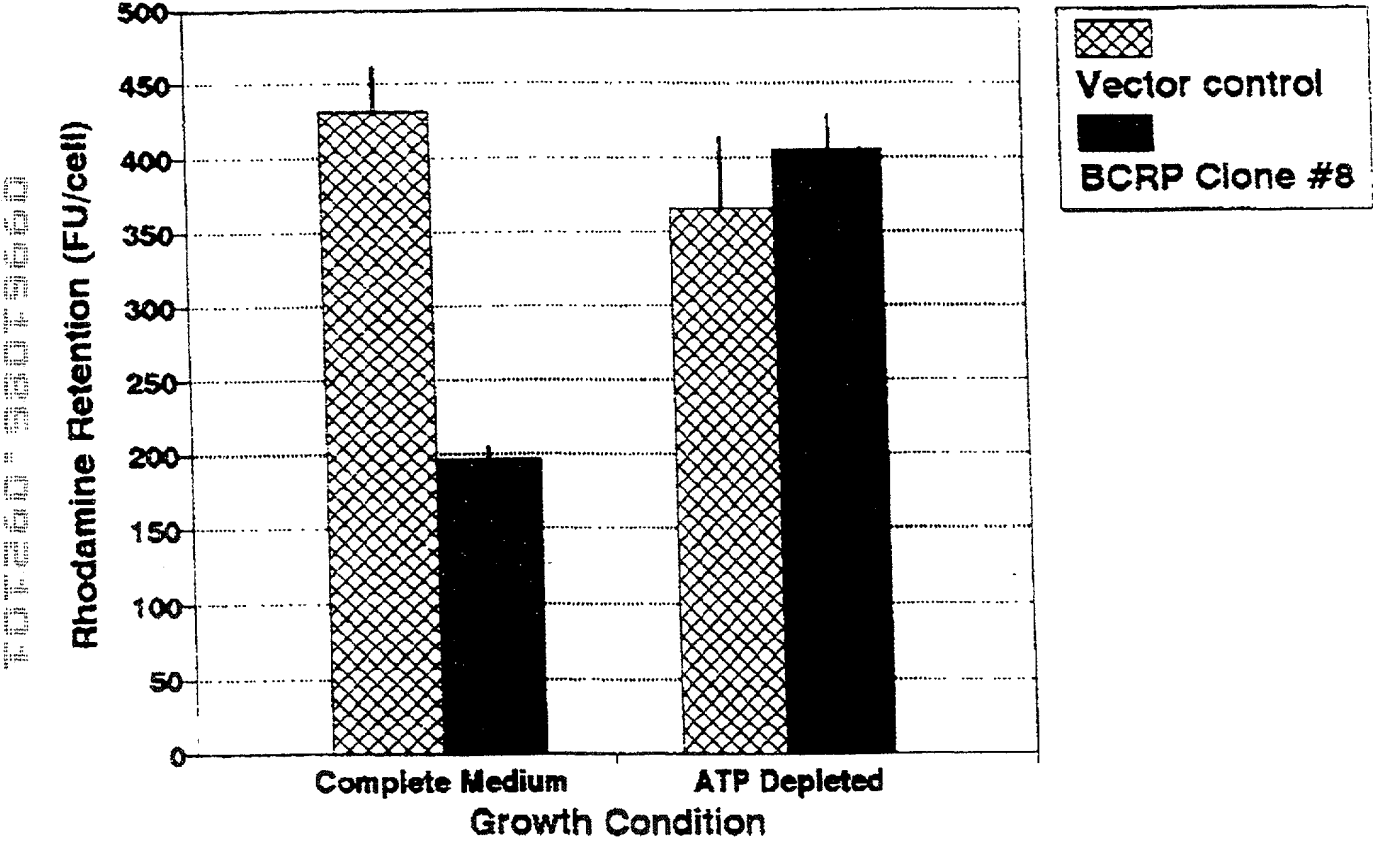


Table 1. Figure 5
Effects of Chemotherapeutic Drugs on BCRP-transfected MCF-7 Cells

Effects of Chemotherapeutic Drugs on BCRP-transfected MCF-7 Cells

Cell Line	Mitoxantrone		Daunorubicin		Doxorubicin		Idarubicin		CisPlatin		Paclitaxel	
	LC50	RF	LC50	RF	LC50	RF	LC50	RF	LC50	RF	LC50	RF
MCF-7/W	48	1.0	47	1.0	57	1.0	76	1.0	2,357	1.0	1.9	1.0
MCF-7/pcDNA3	54	1.1	72	1.5	66	1.2	126	1.7	3,525	1.5	3.0	1.6
MCF-7/BCRPe19	21	0.4	54	1.1	67	1.2	107	1.4	6,950	2.8	0.8	0.4
MCF-7/BCRPe6	393 ^{***}	8.2	218 ^{***}	4.5	254	5.2	140	1.8	3,080	1.3	1.4	0.7
MCF-7/BCRPe8	1,496 ^{***}	31.2	328 ^{***}	7.0	768 [*]	9.2	265	3.5	3,700	1.6	1.8	0.9
MCF-7/AdrVp	160,000 ^{***}	3333	1667 ^{***}	35.5	8650 ^{***}	175.0	70	0.9	4,700	2.01	2.8	1.5

^a = differs significantly from MCF-7/W or MCF-7/pcDNA3, *p* < 0.05 (Student's *t* test)

* = differs significantly from MCF-7/V or MCF-7/pcDNA3, $p < 0.01$ (Student's *t* test)

[illegible]

Figure 6

Expression of Human w gene in MCF-7 Cells,
Detected by RT-PCR

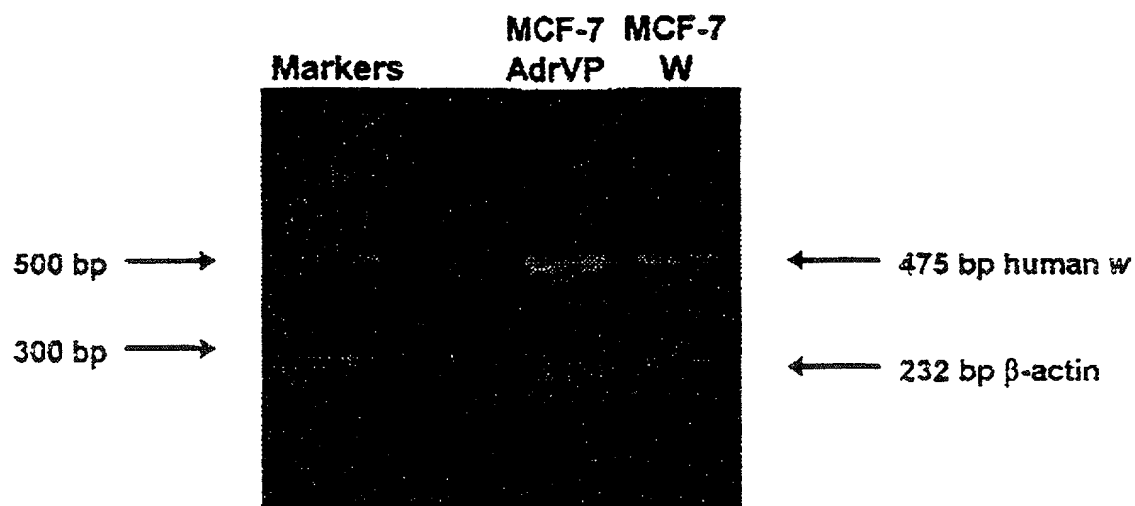


Figure 7.

**RT-PCR detection of BCRP mRNA expression in MCF-7/W cells
or Blast Cells from Patients with Acute Myeloid Leukemia**

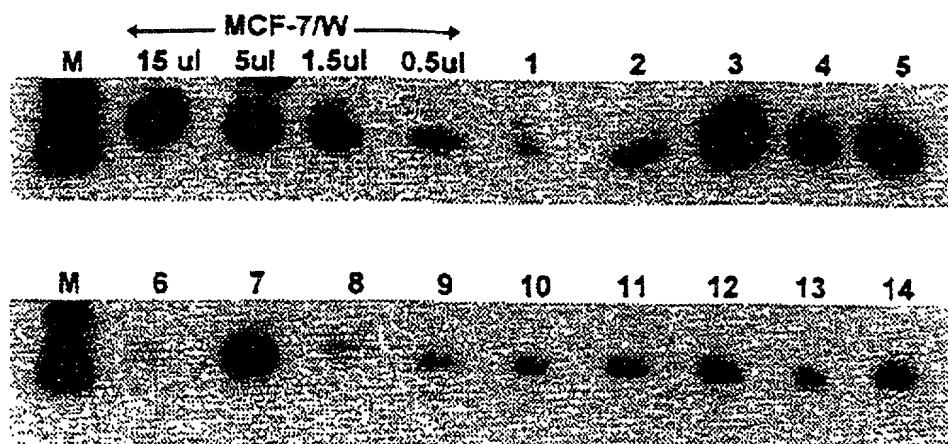


Figure 7. Detection of the expression of BCRP mRNA transcripts in MCF-7/W cells or in blast cells from 14 patients with AML. Total cellular RNA was isolated as described previously (10), then 1 ug of RNA was added to a reverse-translation reaction mixture containing AMV reverse transcriptase, and oligonucleotide primers specific for beta-actin (10) or BCRP (see Example 11), as described previously (10). Following reverse-transcription, PCR was performed as described in Example 11, then an aliquot of the PCR reaction mix was subjected to agarose gel electrophoresis. For BCRP, the agarose gel was transferred to nitrocellulose membranes then Southern hybridization was done using ³²P-labeled "clone-8 PCR product" as a probe for BCRP. A radioautograph of this Southern blot is shown in this figure. M=DNA size marker. The number under MCF-7 indicates the ul of PCR reaction mixture that was added to the agarose gel lane. The numbers 1 to 14 indicate an AML patient blast cell sample; 15 ul of PCR reaction mix were added per gel lane for the AML samples. For beta actin, the PCR product on ethidium-bromide stained gels was approximately equal for the patient samples and for an equivalent amount of MCF-7/W PCR reaction mixture (data not shown).

FIGURE 8A

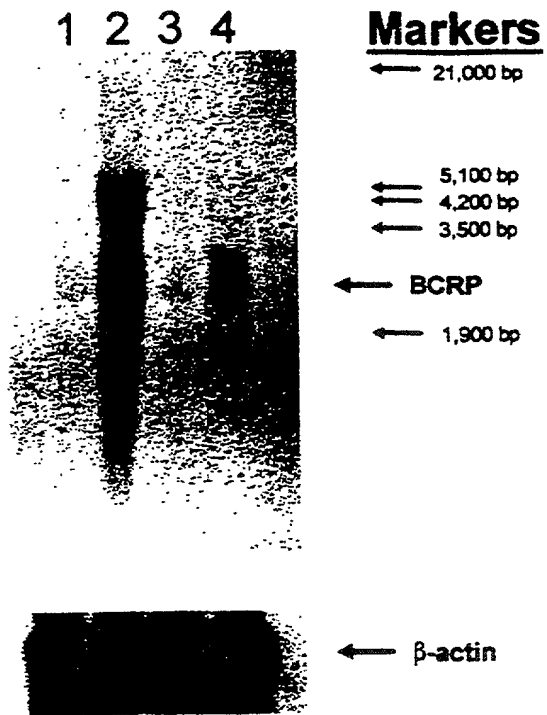


FIGURE 8B

1 2 3 4 5 6 7 8 9 10

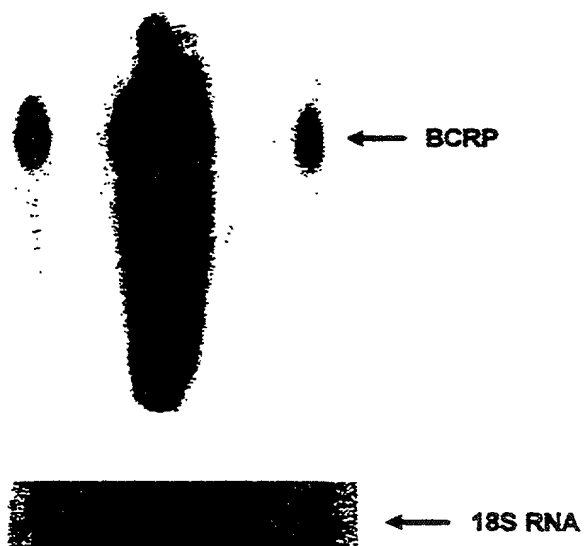


FIGURE 8C

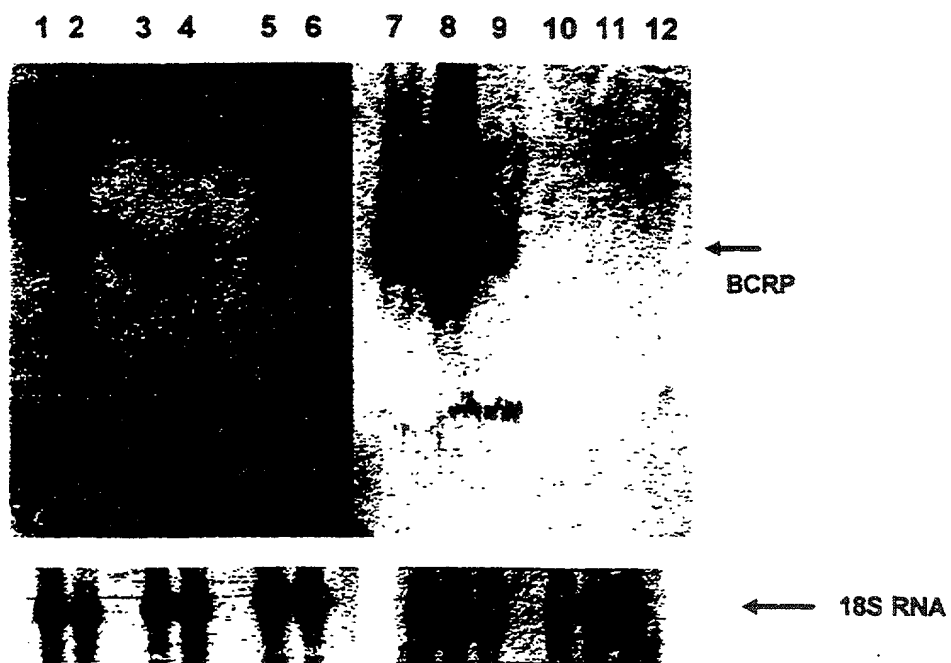
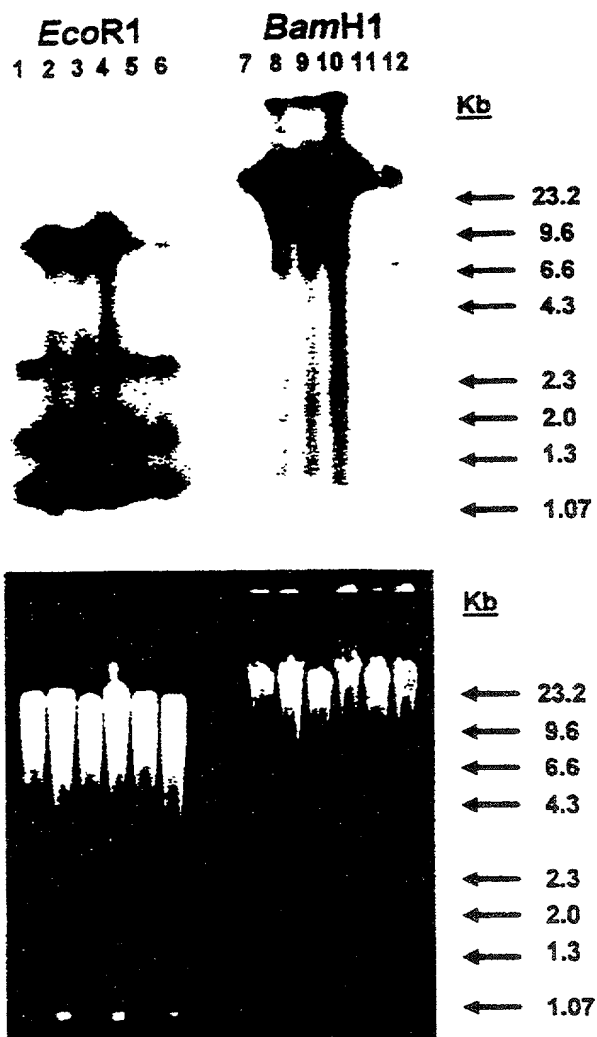


FIGURE 9



FTC Effects on BCRP Transfected Cells

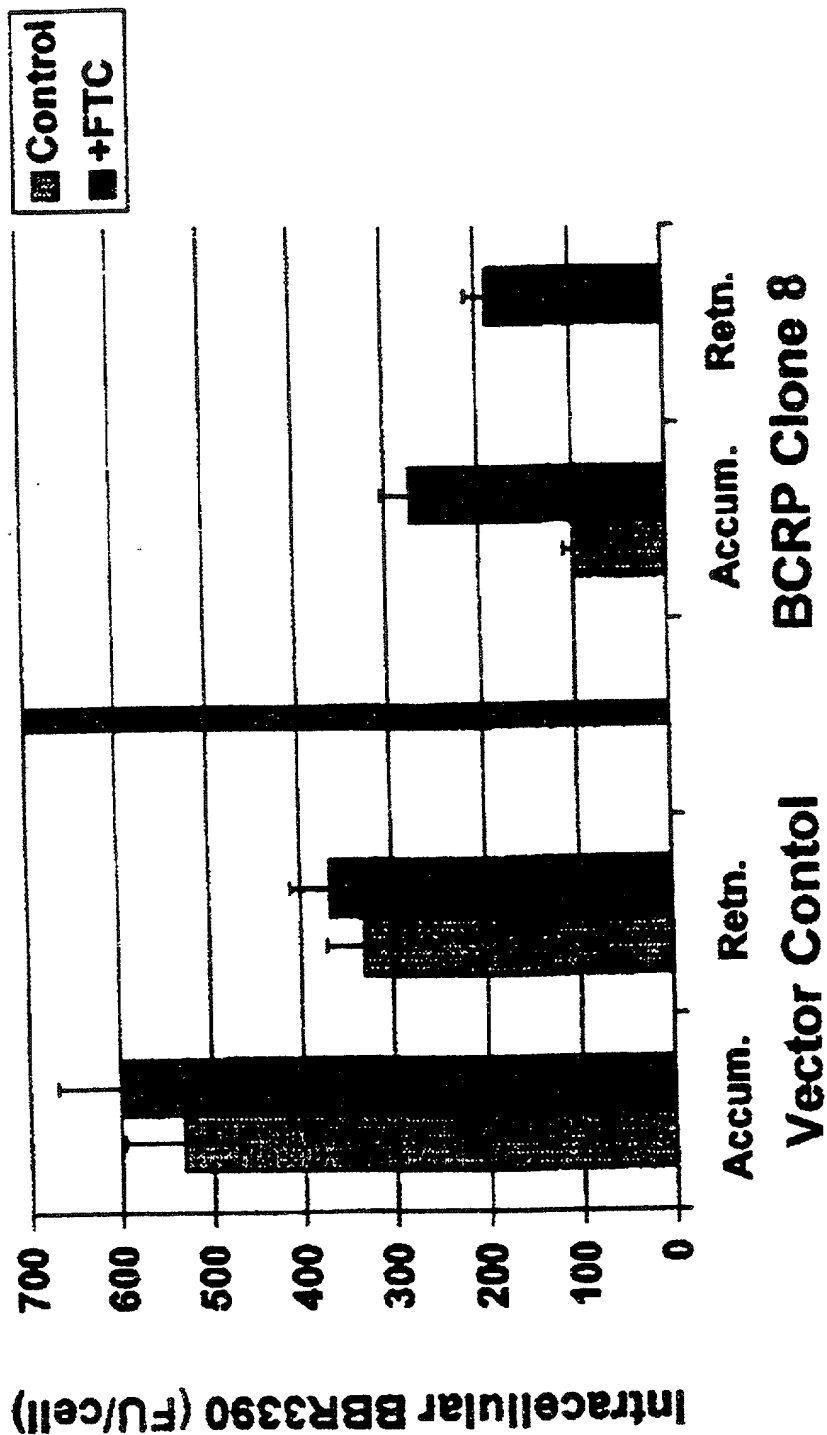


FIGURE 10